

Part 21 (PAR)

Event # 51395

<b>Rep Org:</b> WESTINGHOUSE	<b>Notification Date / Time:</b> 09/15/2015 09:14 (EDT)	
<b>Supplier:</b> EATON CORPORATION	<b>Event Date / Time:</b> 09/15/2015 (EDT)	
	<b>Last Modification:</b> 09/15/2015	
<b>Region:</b> 1	<b>Docket #:</b>	
<b>City:</b> CRANBERRY TOWNSHIP	<b>Agreement State:</b>	Yes
<b>County:</b>	<b>License #:</b>	
<b>State:</b> PA		
<b>NRC Notified by:</b> JAMES A GRESHAM	<b>Notifications:</b> KENNETH RIEMER	R3DO
<b>HQ Ops Officer:</b> JEFF HERRERA	PART 21/50.55 REACTORS	EMAIL
<b>Emergency Class:</b> NON EMERGENCY		
<b>10 CFR Section:</b>		
21.21(d)(3)(i)	DEFECTS AND NONCOMPLIANCE	

**PART 21 REPORT - POTENTIALLY AFFECTED COILS USED IN FREEDOM SIZE 1 AND SIZE 2 STARTERS AND CONTACTORS**

The following information was excerpted from a facsimile:

"The Basic component that contains the potential defect is manufactured by Eaton Corporation and commercially dedicated by Westinghouse. The coil (part number 9-3285-19) is used in Freedom Size 1 and Size 2 starters and contactors. Westinghouse has delivered potentially affected parts to the LaSalle generating station.

"These coils are to be manufactured using high temperature wire as dictated in the Westinghouse qualification program and per Eaton's manufacturing documentation. After the in-service failure at the plant, a sample was taken and subjected to Fourier Transform Infrared Spectroscopy to verify the correct wire was used during manufacturing. This analysis resulted in the finding that the coil windings were not manufactured using the required high temperature wire and were manufactured from a lower temperature class of wire that was not qualified for use in full voltage non-reversing (FVNR) applications. These coils are manufactured by Eaton at their Haina, Dominican Republic facility.

"The lower temperature wire is acceptable in full voltage reversing (FVR) applications, but not in FVNR applications as dictated by the Westinghouse qualification. The safety concern is if these coils were used in redundant safety related applications and were to fail, that safety function may not be available. The failure is due to heat and would not likely occur simultaneously, but more likely would occur at random times. Due to the limited data available on these coil failures, the possibility of simultaneous failures cannot be eliminated.

"Forty-three potentially affected coils were delivered to LaSalle. Forty one were supplied as spare parts and were never installed in the plant. One coil was supplied and installed at the plant and failed after 6 weeks of service.

JE19  
NRK

An alarm was annunciated in the control room and the part was replaced. One additional coil was supplied and installed at the plant. This was removed from service and the coil was sent for testing. The coil in this starter was made from the correct material.

"Eaton has confirmed to Westinghouse that this issue may affect coils made between May 29, 2014 and November 3, 2014. Westinghouse has informed its customer and identified the potentially affected coils to them. The customer has identified the affected parts and has returned them to Westinghouse for replacement. Westinghouse has purchased a lot of new coils and sent samples to have the coil wire verified (destructive testing). Future deliveries will be supplied from these dedicated coils. There are currently no potentially affected parts in service."

For additional information, contact Mr. James A. Gresham, Regulatory Compliance, Westinghouse Electric Company, 1000 Westinghouse Drive, Suite 310, Cranberry Township, Pennsylvania 16066. Phone number: (412) 374-4643

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## **FAX COVERSHEET**

September 15, 2015

**TO:** NRC Operations Center

**FAX:** (301) 816-5151

**FROM:** James A. Gresham, Manager, Regulatory Compliance

**Phone:** (412) 374-4643

**Fax:** (724) 940-8560

**SUBJECT:** Notification Interim Report of the Evaluation of a Deviation Pursuant to 10 CFR 21.21(a)(2)

Pages Including Cover Sheet: 4



Westinghouse Electric Company  
1000 Westinghouse Drive, Building 3  
Cranberry Township, Pennsylvania 16066  
USA

U.S. Nuclear Regulatory Commission  
Document Control Desk  
11555 Rockville Pike  
Rockville, MD 20852

Direct tel: (412) 374-4643  
Direct fax: (724) 940-8560  
e-mail: greshaja@westinghouse.com

LTR-NRC-15-76  
September 15, 2015

**Subject: Notification of the Potential Existence of Defects Pursuant to 10 CFR Part 21**

The following information is provided pursuant to the requirements of 10 CFR Part 21 to report a potential defect that could lead to a substantial safety hazard. This issue concerns the wire used to make coils that are used in Freedom Size 1 and Size 2 starters, and Freedom Size 1 and Size 2 contactors.

(i) Name and address of the individual or individuals informing the Commission.

James A. Gresham  
Westinghouse Electric Company  
1000 Westinghouse Drive, Suite 310  
Cranberry Township, Pennsylvania 16066

(ii) Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.

The Basic component that contains the potential defect is manufactured by Eaton Corporation and commercially dedicated by Westinghouse. The coil (part number 9-3285-19) is used in Freedom Size 1 and Size 2 starters and contactors. Westinghouse has delivered potentially affected parts to the LaSalle generating station.

(iii) Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

Westinghouse Electric Company  
1000 Westinghouse Drive  
Cranberry Township, Pennsylvania 16066

(iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

These coils are to be manufactured using high temperature wire as dictated in the Westinghouse qualification program and per Eaton's manufacturing documentation. After the in-service failure at the plant, a sample was taken and subjected to Fourier Transform Infrared Spectroscopy to verify the correct wire was used during manufacturing. This analysis resulted in the finding that the coil windings were not manufactured using the required high temperature wire and was manufactured from a lower temperature class of wire that was not qualified for use in full voltage non-reversing (FVNR) applications. These coils are manufactured by Eaton at their Haina, Dominican Republic facility.

The lower temperature wire is acceptable in full voltage reversing (FVR) applications, but not in FVNR applications as dictated by the Westinghouse qualification

The safety concern is if these coils were used in redundant safety-related applications and were to fail, that safety function may not be available. The failure is due to heat and would not likely occur simultaneously, but more likely would occur at random times. Due to the limited data available on these coil failures, the possibility of simultaneous failures cannot be eliminated.

- (v) The date on which the information of such defect or failure to comply was obtained.

The Westinghouse president was informed of this issue on September 14, 2015

- (vi) In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part.

Forty-three potentially affected coils were delivered to LaSalle.

Forty-one were supplied as spare parts and were never installed in the plant.

One coil was supplied and installed at the plant and failed after 6 weeks of service. An alarm was annunciated in the control room and the part was replaced.

One additional coil was supplied and installed at the plant. This was removed from service and the coil was sent for testing. The coil in this starter was made from the correct material.

- (vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

Eaton has confirmed to Westinghouse that this issue may affect coils made between May 29, 2014 and November 3, 2014. Westinghouse has informed its customer and identified the potentially affected coils to them. The customer has identified the affected parts and has returned them to Westinghouse for replacement. Westinghouse has purchased a lot of new coils and sent samples to have the coil wire verified (destructive testing). Future deliveries will be supplied from these dedicated coils. There are currently no potentially affected parts in service.

- (viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

Westinghouse has recommended returning all the potentially affected coils for replacement.

- (ix) In the case of an early site permit, the entities to whom an early site permit was transferred.

Not applicable

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Very truly yours,



James A. Gresham, Secretary  
Westinghouse Safety Review Committee

cc: E. Lenning (NRC MS O-11-F1)